

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

Listing of Claims:

Claims 1-14 (Canceled).

Claim 15 (New): An optical module including:

an optical component having an upper and lower surface, including a waveguide holding groove located in the upper surface of the optical component; and

an optical waveguide that is optically coupled with said optical component, the optical waveguide fixed to the optical component by a bond material that is arranged between an outer lateral surface of the waveguide and sidewalls of the waveguide holding groove,

wherein said waveguide holding groove has substantially a circular cross-sectional shape, and the waveguide holding groove is located in the optical component in a way to form a groove opening on the upper surface of the optical component, the groove opening formed by an intersection of the sidewalls of the groove with the upper surface of the optical component,

wherein a width of the groove opening on the upper surface of the optical component is narrower than a diameter of the optical waveguide located in said waveguide holding groove, and a diameter of the optical waveguide is narrower than a diameter of the circular cross-sectional shape of the waveguide holding groove.

Claim 16 (New): The optical module according to Claim 15, wherein

the waveguide holding groove is located at a depth of the optical component such that an upper segment of the optical waveguide is located above the upper surface of the optical component.

Claim 17 (New): The optical module according to claim 15, wherein said optical waveguide is provided with a filter having a specific characteristic, the filter located in the waveguide holding groove such that a portion of the filter is located outside of the waveguide holding groove through the groove opening.

Claim 18 (New): The optical module according to claim 17, wherein said filter has a specific angle of inclination to the optical axis of a propagation light propagating through said optical waveguide.

Claim 19 (New): The optical module according to claim 17, wherein said filter is provided on the end face of the optical waveguide inside the waveguide holding groove.

Claim 20 (New): The optical module according to claim 15 or claim 19, wherein a plurality of said waveguides are provided.

Claim 21 (New): The optical module according to claim 15, wherein said optical waveguide has at least a part of the outer lateral surface engaged with the sidewalls of the waveguide holding groove.

Claim 22 (New): An optical module comprising the optical component according to Claim 15, and further comprising:

a light source portion configured to output a signal light guided by said optical component; and a spot size conversion portion configured to convert a spot size of the signal

light outputted from said light source portion and couple the spot size light by a spot size adapted to the end portion of said optical waveguide of said optical component.

Claim 23 (New): The optical module according to claim 15, wherein said optical component further comprises:

an alignment mechanism configured to align the optical component.

Claim 24 (New): The optical module according to claim 22, wherein said spot size conversion portion is formed by a planer light wave circuit mounted on a substrate.

Claim 25 (New): The optical module according to claim 24, wherein the substrate where said spot size conversion portion is formed and the substrate where said light source portion is formed are configured by separate entities, and are configured to be independently positioned.

Claim 26 (New): The optical module according to claim 25, wherein the substrate formed with said spot size and the substrate formed with said light source portion are formed with V grooves, respectively, and a holding member configured to hold said optical component is formed with a protrusion, and by engaging said each V groove with said protrusion, the positioning is made possible.

Claim 27 (New): The optical module according to claim 15, wherein from a cross-sectional view the sidewalls of the waveguide holding groove are substantially co-central with the lateral outer surface of the optical waveguide.